

Arnold Engineering Development Center Arnold Air Force Base, Tenn. 37389

An Air Force Materiel Command Test Facility

Test Before Flight

7V Space Chamber

The 7V Space Chamber is a state-of-the-art deep space environment simulation test facility designed to test high performance interceptors and surveillance sensors. The chamber shares vehicle handling and target systems with the 10V Space Chamber as well as support infrastructure. The facility consists of a 7-foot-diameter by 21-foot-long chamber containing a full gaseous helium thermal shroud and an optically clean vacuum allows vibration isolation of the optical bench and all optical elements. The chamber is surrounded by a class 100 clean room with an adjoining class 1000 build-up area.

Capabilities:

Thermal Control A gaseous helium shroud permits deep

space environment simulation down to

20 degrees Kelvin.

Vacuum Range $\leq 5x10^{-7}$ Torr to local atmospheric

pressure.

Working Volume 10-foot-diameter x 21-foot-long.

Support Structure Pneumatic suspension system provides an optical line-of-site vibrational stability of the

internal optical bench of 3 microradians.

Pumping System Turbo molecular and cryogenic high vacuum pumps.

Sensor Mounting Adjustable mount isolation valve allows installation and removal of sensors while the cham-

ber is at test conditions.

Cold Wall Full gaseous helium cryogenic shroud capable of temperatures down to 20 degrees Kelvin.

Special Features Chamber is housed within a class 100 clean room with an adjoining class 1000 build-up

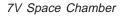
area.

Data All facility data time tagged and archived. Test article data archived if requested.

Work Areas Test customer offices available. Limited hardware storage available. Contact Bobby W. Smith (931) 454-6519 <u>bobby.w.smith@arnold.af.mil</u>











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